THE FACTS

Information About Environmental Cleanup at McClellan AFB September 1999

Produced by McClellan AFB Environmental Management — Number 28

Soil Vapor Extraction System Proposed as Remedy for Investigation Clusters 32, 34, 37, 41, and 42 Contaminated Soils at McClellan Air Force Base

The United States Air Force invites public comment on the proposed removal actions at Investigative Clusters (ICs) 32, 34, 37, 41, and 42. These clusters are located on the southeast area of the base across the railroad tracks from Roseville Road bounded just south of Longview Drive and just north of Myrtle Avenue. There are three major points on which the Air Force invites public comment: The location and number of wells where the Air Force will use soil vapor extraction technology, and the type of soil vapor extraction technology selected for each location.

The Air Force welcomes the participation and input of the public concerning the environmental management and cleanup of McClellan AFB. This fact sheet is an overview of a proposal to clean contaminated soils on the southeast side of the base. This fact sheet will explain the causes and locations of the contamination, the proposed remedy for cleanup and how that remedy will work.

During the public comment period September 13 through October 13, 1999 the public has the opportunity to comment on the proposed action, meet with members of the McClellan Environmental Management team and receive more information on the contamination and proposed cleanup remedy. *Comments should be postmarked by October 13, 1999.*

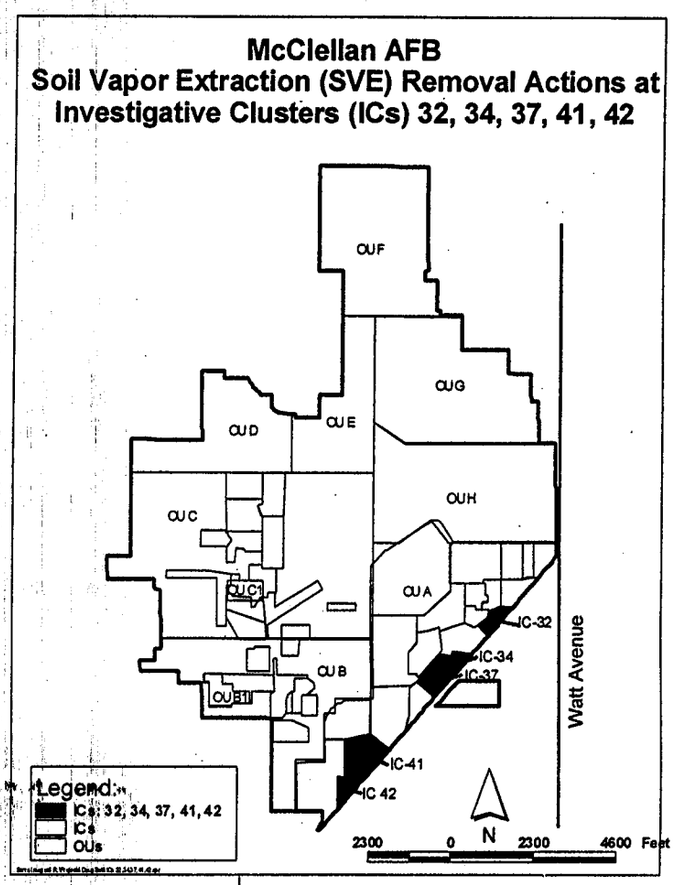
To comment please write to:

SM-ALC/EM
Attn: Merianne Briggs
5050 Dudley Blvd., Suite 3
McClellan AFB, CA 95652-1389

The Sites

The area in this cleanup action is called Operable Unit A (OU A). There are five investigative clusters (ICs) that are involved. They are IC 32, 34, 37, 41 and 42.

The soil is contaminated with volatile organic compounds (VOCs). VOCs are carbon containing compounds that evaporate readily at room temperature. Some are known or suspected carcinogens. The proposed removal action will use soil vapor extraction (SVE) technology. This technology is explained later in this fact sheet. More detailed information will be available at the public meeting.



IC 32 is in the northeast portion of OU A, consisting of 7.5 acres. It has eight study areas and confirmed sites. Previous activities have included industrial and sanitary waste treatment with associated sludge beds and a fuel tank farm. The remedial investigation confirmed the existence of fuels and solvents in the soil including trichloroethane (TCE). TCE is a liquid that is found in solvents. Groundwater is water beneath the ground that fills the pores between particles of soil, sand and gravel. The groundwater at this site has contamination above what is the maximum contaminant level (MCL). The MCL is a federal drinking water standard for water at the tap but is used in developing groundwater cleanup levels.

IC 34 is in the central portion of OU A, consisting of 5.8 acres. It has seven study areas and confirmed sites. Previous activities have included a generator washrack and equipment staging area, base fuel pipeline, engine testing, radioactive instrumentation repair, dry cleaning, automotive washrack, hazardous waste staging area, and cooling ponds for engine test buildings. The remedial investigation confirmed the existence of solvents and fuels. An active bioventing system operated at this site from 1993 to 1998. Bioventing is a treatment method for this type of contamination. This method may have removed virtually all the solvent and fuels but this proposed removal action will be used to verify that effective cleanup has occurred below the bioventing system's effective depth of 40 feet below the ground surface. Recent sampling did not verify the existence of TCE in groundwater over the MCL.

IC 37 is also in the central portion of OU A, adjacent to IC 34, consisting of 15 acres. It has eight study areas, potential release locations, and confirmed sites. Previous activities have included an industrial waste line, fuel pipeline, a steam generation plant, fuel testing facility, various maintenance shops. These shops serviced electronic components, electric motors and generators, and diesel and gasoline engines, and supported various painting activities. A large jet engine repair facility was present in Bldg. 475F and a large engine testing facility was in service in Bldg. 473. Finally, to the southwest of Bldg. 475 stood Tank

Public Meeting Thursday, September 23
5:30 p.m. to 7 p.m.
North Highlands Community Center
6040 Watt Avenue
McClellan Air Force Base Environmental Management personnel will be available during this time to talk one-on-one about this Soil Vapor Extraction Proposed Action. There will be displays and information about the McClellan AFB Environmental Management Program.

The Site-Specific EE/CAs for IC 32, 34, 37, 41, and 42, as well as the Basewide EE/CA are available for review on September 13, 1999 at the:

Information Repository
5050 Dudley Blvd, Suite 3
McClellan AFB, CA 95652-1389
Hours: Mon-Fri 8:00 am - 3:30 pm
Contact: Danny Durkee at
(916) 643-1742 ext. 347
or
McClellan AFB Environmental Management Web Site
http://www.mcclellan.af.mil/EM/
or
Call Ms. Briggs at:
(916) 643-1742 ext. 457 or 354

For more information contact:

Merianne Briggs
5050 Dudley Blvd., Suite 3
McClellan AFB, CA 95652-1389
(916) 643-1742 ext. 457 or 354

Nathan Schumacher
Public Participation Specialist
Cal/EPA Department of
Toxic Substances Control
(916) 255-3650

David Cooper
Community Relations Specialist
U.S. EPA
(415) 744-2179 or
(800) 291-3075

Farm No. 6 containing seven former underground storage tanks. Significant quantities of solvents, principally TCE were found in the soil at IC37. Fuels were found in groundwater plumes to the northeast of Bldg. 473. A groundwater plume near the surface was impacted more than others.

IC 41 is in the southern portion of OU A, directly south of the runway, consisting of 25.6 acres. It has three study areas and confirmed sites. Previous activities have included a storage area for clean jet fuel tanks, a paved storage area, and previous underground storage tanks. Quantities of VOCs, principally TCE, were found in sufficient quantity to warrant the proposal to convert a soil boring into an SVE well. Also, a small quantity of fuel, not believed to extend below 21 feet below ground level, was found. The groundwater did not show an impact of compounds above MCLs, including TCE.

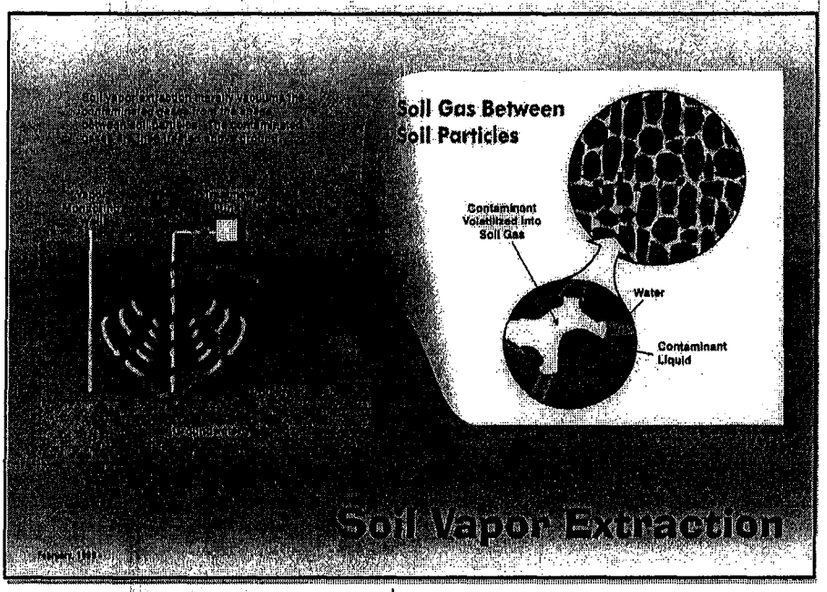
IC 42 is also in the southern portion of OU A, adjacent to IC41 to the southwest, consisting of about 25 acres. It has one confirmed site, CS 24, which was a demolition and burning pit. There was also storage on both paved and unpaved land. The Southern Pacific rail spur next to the base property was the turn-off point for rail traffic onto McClellan AFB. VOCs were found in the soil gas there and the area will be monitored during the SVE process.

Soil Vapor Extraction

Soil Vapor Extraction, or SVE, is the process of literally vacuuming soil gas from the vadose zone of the soil. The vadose zone is the area from the ground surface to the water table. At McClellan AFB, this usually extends to about 110 feet below the surface of the ground.

A four inch diameter well, usually made of PVC pipe, will be installed. This pipe has small screens in the casing to allow passage of soil gas. The typical screen begins 20 feet below the surface of the ground down to 100 feet. The type of contaminant and the type of soil dictates other screening intervals. The SVE well is installed where the investigation reveals the highest localized concentration in the plume.

Once vacuum is applied, the soil gas is swept into the well from distances of usually



300 to 500 feet at McClellan sites. The soil gas contaminants are routed into a treatment plant on the SVE unit.

There are two types of treatment systems. One treatment uses heat to destroy the contaminants and the other uses granular activated carbon to capture the contaminants which are taken for disposal to licensed disposal sites.

The soil gas is routinely monitored in the extraction wells at SVE sites. To better understand the cleanup progress, several monitoring wells are also installed. The typical construction is of one, two, or three one-inch PVC tubes, with two-foot screen intervals. Placement of the tubes is dependent on soil gas results and the particular soil type in the area. Additionally, a monitoring unit is used to observe the vacuum influence of the nearby soil vapor extraction well.

The Proposed Remedy for Cleanup

Installation and operation of a soil vapor extraction system has been evaluated and recommended as the remedy for removal of volatile organic compounds from fuels and solvent soil gases in the vadose zone at ICs 32, 34, 37, 41, and 42. These recommendations were documented in the *McClellan Basewide Engineering Evaluation and Cost Analysis for Soil Vapor Extraction* for each IC. Regulatory Agencies have recognized that at times site conditions are well suited to a particular technology and that technology can be presumed to be appropriate, called a *presumptive remedy,* without conducting an exhaustive evaluation. Criteria that were evaluated included contaminant volatility, soil permeability, depth of contamination, and the threat of further groundwater contamination. Based on the conditions at McClellan AFB the presumptive remedy for vadose zone soil contamination by VOCs is SVE.

These EE/CAs are available for review at McClellan Air Force Base's Information Repository, at the public meeting and on the McClellan AFB Environmental Management's Web site.

At this time site-specific documents which combine SVE plant design and a site-specific addendum to the Basewide Removal Action Work Plan for SVE are in draft form for ICs 32, 34, and 37. A similar document for ICs 41 and 42 will be issued in the near future. IC32 consists of one well, routed to the SVE unit at IC27. IC34 and IC37 consists of five wells, routed to the SVE unit at nearby IC35. The IC41 and 42 sites, consists of three wells, which will be routed to the future SVE system at IC43.

What is next?

Following the public comment period, the Air Force will prepare a written response to significant comments and make it available to the public in the Information Repository.

Department of the Air Force
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